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IN THE CLAIMS:

Please amend Claim 8 to read as follows:

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8. (ONCE AMENDED) A compact optical tracking system for magnetic tape, comprising:

- a magnetic head assembly;
- a positioning actuator for changing the position of the magnetic head assembly; and
- an optical servo module structure for outputting a position signal to the positioning actuator, causing the positioning actuator to change a position of the magnetic head assembly, wherein the optical servo module structure comprises at least one optical servo module, comprising:
 - an optical beam source for emitting an optical beam;
 - a detector for detecting an optical beam reflection; and
 - an optical beam interference composition for interfering with the optical beam and producing a predetermined pattern on a target;

wherein each optical servo module contains at least a first and second detector for detecting an optical beam reflection;

wherein the optical servo module structure comprises a plurality of optical servo modules;

further comprising a yoke assembly, wherein the optical servo module structure is affixed to a yoke assembly, and the optical servo module structure faces a back side of the magnetic tape;

further comprising a grating assembly, wherein the grating assembly comprises at least one reference grating used as a target for the predetermined pattern emitted from the optical source within the optical servo module;

further comprising an outboard reference grating on the grating assembly, wherein the outboard reference grating is affixed to the grating assembly past the extent of the magnetic tape; and

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an outboard servo module, wherein the predetermined pattern emitted from the optical source within the outboard servo module uses the outboard reference grating as a target.

Please add the following claims:

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24. An optical tracking system for aligning a recording medium, comprising:
at least one source of coherent electromagnetic radiation;
an interference generating device;
wherein the interference generating device causes the superposition of coherent radiation emitted from the at least one source to form at least two spots on the recording medium;
wherein the two spots are formed at different distances from a track on the recording medium;
wherein the direction and magnitude of offset of the servo track is determined based on the relative locations of the at least two spots with respect to the track.
25. The system of Claim 24 wherein the track is a servo track.
26. The system of Claim 24 wherein the relative locations of the at least two spots are determined by measuring reflected intensity of the at least two spots.
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REMARKS

Claims 1-23 are pending in the present application. Reconsideration of the claims is respectfully requested. Claims 24-26 are requested added. These new claims are not believed to add new matter, and their entry is respectfully requested. Claim 8 has been amended to include all limitations of the claims from which it depends, and its scope has not been altered.

Also, applicant has submitted formal drawings to replace the informal drawings objected to in the Office Action. These drawings are submitted to the Official